



# UNITED STATES PATENT AND TRADEMARK OFFICE

*Ch*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/533,028

04/26/2005

George D Hartman

20942P

2202

210

7590

10/03/2006

MERCK AND CO., INC

P O BOX 2000

RAHWAY, NJ 07065-0907

EXAMINER

RAO, DEEPAK R

ART UNIT

PAPER NUMBER

1624

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



### DETAILED ACTION

This office action is in response to the amendment filed on July 24, 2006.

Claims 1-10, 14, 16 and 58-59 are pending in this application.

#### ***Withdrawn Rejections/Objections:***

Applicant is notified that any outstanding rejection/objection that is not expressly maintained in this office action has been withdrawn or rendered moot in view of applicant's amendments and/or remarks.

#### ***The following rejections are maintained:***

1. Claims 1-10, 14, 16, and new claims 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilodeau et al., WO 02/45652. The reference teaches a generic group of pyrimidine compounds, which encompass the instantly claimed compounds, see formula I in page 5 wherein one of the substituents R<sup>1</sup> or R<sup>2</sup> are as defined in page 6, lines 1-13, which list includes the groups:

(C=O)<sub>r</sub>O<sub>s</sub>(C<sub>1</sub>-C<sub>10</sub>)alkyl,

(C=O)<sub>r</sub>O<sub>s</sub>heterocyclyl wherein r and s are independently 0 or 1,

(C<sub>0</sub>-C<sub>6</sub>)alkyl-NR<sup>a</sup>R<sup>b</sup>; etc.

As can be seen from the above, the reference genus includes compounds wherein the pyrimidine core is substituted with -O-heterocyclyl when r is 0 and s is 1. The reference discloses specific compounds wherein the pyrimidine core is substituted with -OMe (e.g., compound 22-11); -N(CH<sub>3</sub>)-CH<sub>2</sub>-piperidiny1 (e.g., compound 19-4); etc. Therefore, the reference teaches the

Art Unit: 1624

equivalency of the various substituents defined under the definition of the variables  $R^1$  and  $R^2$ , as these substituent groups are disclosed to be alternatives. The reference compounds are taught to be useful as pharmaceutical therapeutic agents having kinase inhibitory activity, see pages 15-19. It would have been obvious to one having ordinary skill in the art at the time of the invention to select any of the species of the genus taught by the reference, including those instantly claimed, because the skilled chemist would have the reasonable expectation that any of the species of the genus would have similar properties and, thus, the same use as taught for the genus as a whole i.e., as therapeutic agents. One of ordinary skill in the art would have been motivated to select the claimed compounds from the genus in the reference since such compounds would have been suggested by the reference as a whole. It has been held that a prior art disclosed genus of useful compounds is sufficient to render prima facie obvious a species falling within a genus.

Applicant's arguments have been fully considered but they were not deemed to be persuasive. Applicant argues that 'the reference does not teach, nor suggest, replacing the N at the "X" position with an oxygen or sulfur atom'. The reference, however, teaches the equivalency of the various substituent groups provided under the definition of  $R^1$  and  $R^2$  as they are taught to be alternatives. This equivalency of substituents provides sufficient motivation to one of ordinary skill in the art to prepare other compounds within the genus taught by the reference with the reasonable expectation of obtaining compounds with similar properties and therefore the same use as taught for the reference compounds.

2. Claims 1-10, 14, 16, and new claims 58-59 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10, 12-15,

Art Unit: 1624

17-18, 20-21, 23, 26-33, 40 and 44-46 of copending Application No. 10/677,687 (now allowed, and will be issued as U.S. Patent No. 7,115,597, issue date October 3, 2006). The reasons provided in the previous office action and the reasons provided for 35 U.S.C. 103 rejection above are incorporated here by reference. Applicant did not specifically argue this rejection.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

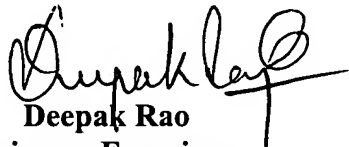
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deepak Rao whose telephone number is (571) 272-0672. The examiner can normally be reached on Tuesday-Friday from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, can be reached at (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 1624

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Deepak Rao**  
**Primary Examiner**  
**Art Unit 1624**

September 28, 2006